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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------------|
| 10/525,832 | 02/25/2005 | Ruediger Halfmann | 1454.1606 | 9175 |
| 21171 7590 10/24/2007 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | EXAMINER LAM, JOSEPH M | |
| | | | ART UNIT 4183 | PAPER NUMBER |
| | | | MAIL DATE 10/24/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-----------------|-----------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/525,832 | HALFMANN ET AL. | |
| | Examiner | Art Unit | |
| | Joseph M. Lam | 4183 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/25/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/25/2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/25/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 21 - 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Sano (US 2004/0198235 A1)

Sano discloses a station for at least one of transmission and reception in a radio communication system with at least one of mobile stations and mobile interference sources comprising:

- * A velocity determining device determining at least one of actual velocities and relative velocities of the at least one of mobile stations and mobile interference sources (see paragraph [0103] and line 5 – 7)

- * A carrier scanning device at least one of determining and identifying an interference free carrier for intended transmission of a sequence of data (see on fig. 6 at location 20, 21), and at least one of a threshold determining device determining a threshold value for a minimum difference between a desired receive signal and an interference signal (see on the paragraph [0035], line 1 – 5), and a duration setting device pre-

Art Unit: 4183

setting a maximum possible transmission duration for transmitting the sequence of data (see on the paragraph [0035] line 13 – 16, and fig. 8 at location 32)

Further more, Sano discloses wherein a transmitting station not involved in the intended transmission of the sequence of data is a mobile interference source (see on the fig. 6 at the location 22.)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 11 – 20 are rejected under 35 U.S.C 103(a) as being unpatentable over Hiroyasu Sano (US 2004/0198235 A1) in view of Molnar et al (US 2002/0044614 A1)

Art Unit: 4183

Sano teach a method for transmitting a sequence of data in a radio communication system, comprising the steps of:

- Checking a radio interface for an interference signal of an interference source by at least one of a first transmitting station and a first receiving station (see reference on the paragraph [0001], line 4 – 9, and Fig. 13).

Sano further teaches the first receiving station, a usual interference source within a detection area based on a determinable velocity of the first receiving station and a transmitted velocity of the interference sources within the detection area of the first receiving station (see on the paragraph [0068] line 1- 8)

Sano further discloses that wherein at least one of a usually maximum possible and maximal sensible velocity is used for stations and interference sources for which no velocity information is available, at least one of within and outside a detection area of the first receiving station (see on the paragraph [0160] line 1 - 10). Sano further discloses determining a maximum possible transmission duration for interference free transmission of the sequence of data, based on at least one of an expected change in intensity of the interference signal and an expected change in intensity of the transmission signal (see paragraph [0161] line 7 - 12). Sano further discloses comprising at least one of determining and estimating a threshold value for a minimum required difference between the intensity of the transmission signal and the intensity of the interference signal as a measurement for a non-interfering signal that does not interfere with the transmission signal (see paragraph [0002] line 3 – 12). Sona further discloses comprising determining a decoding area around the first receiving station

within which the interference signal of the interference source causes unacceptable interference (see on the paragraph [0116] line 1- 8). Sona further disclose comprising exchanging, between the first receiving station and the first transmitting station, parameters at least one of relating to a corresponding station, determined in the corresponding station and relating to transmission conditions (see paragraph [0157] line 2 - 11). Sano further discloses that wherein said exchanging exchanges at least one of the threshold value and the maximum possible transmission duration (see on the paragraph [0022], line 4 -11)

However, Sano does not teach generating a transmission signal at the first transmitting station for transmitting the sequence of data to the first receiving station via the radio interface during a length of time necessary to transmit the sequence of data without the interference source approach to the first receiving station interfering with the transmission signal. As well as, Sano does not teach the determining and estimating an expected **increase / decrease in intensity of the interference signal at the first receiving station** using at least one of actual and maximum possible relative velocity of the interference source and the first receiving station to each other.

In the same of endeavor, Molnar teach generating a transmission signal at the first transmitting station for transmitting the sequence of data to the first receiving station via the radio interface during a length of time necessary to transmit the sequence of data without the interference source approach to the first receiving station interfering with the transmission signal (paragraph [006], line 1 - 6)

Art Unit: 4183

Further more, Molnar teaches one of determining and estimating an expected **increase in intensity of the interference signal at the first receiving station** using at least one of actual and maximum possible relative velocity of the interference source and the first receiving station to each other (paragraph [0024] line 4 - 9). More over, Molnar discloses one of determining and estimating an expected **decrease in intensity of the interference signal at the first receiving station** as a function of at least one of the actual and maximum possible relative velocity of the first transmitting station and the first receiving station to each other (paragraph [0037] line 4 - 8) for the purpose of enhancing mobile communication system to reduce the effect of the interference source on the demodulation / modulation of a desire signal.

Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention to combine Hiroyasu Sano ([abstract: line 1 -6], and fig. 1) and Molnar et al ([abstract: line 1-4] fig.3) in order to enhance the mobile communication system to reduce the effect of the interference source on the demodulation / modulation of a desire signal.

Conclusion

6 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hiroyasu Sano, and Karl James Molnar references are also cited to show related art.

Inquiry

Art Unit: 4183

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph M. Lam whose telephone number is 571-270-1959. The examiner can normally be reached on Monday to Thursday from 7:30 to 5:30 eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on 571-272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Oct. 4, 2007

Joseph Lam

Examiner: Joseph Lam

AU: 4183

Len Tran
LEN TRAN
PRIMARY EXAMINER
10/16/07